

## GV-RK1352 and GV-R1352 Card Reader

The GV-RK1352 and GV-R1352 are card readers designed to recognize identifications cards. GV-RK1352 comes with keypad, allowing it to also recognize PIN codes. Featured with the Wiegand and RS-485 outputs, the readers can be connected to any standard access control panel. The readers are protected by a weather sealed and IP66 compliant housing for outdoor use.

The content of this installation guide refers to the following readers:

- GV-RK1352 firmware V1.2
- GV-R1352 firmware V1.2

### Packing List

#### GV-RK1352

1. GV-RK1352 Card Reader
2. Screw x 2
3. Screw Anchor x 2
4. Front Cover Plate x 2



**Front View**

#### GV-R1352

1. GV-R1352 Card Reader
2. Screw x 3
3. Screw Anchor x 2
4. Security Torx



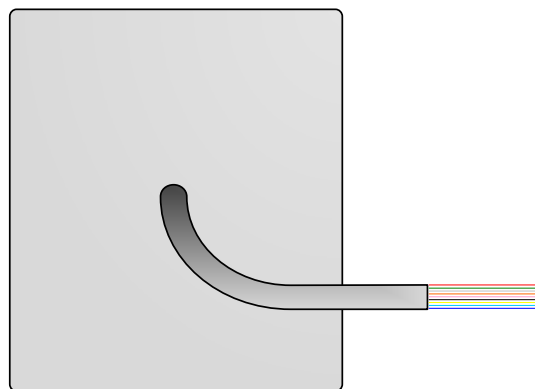
**Front View**

# 1. Physical Descriptions

## 1.1 Electric Wire

### GV-RK1352

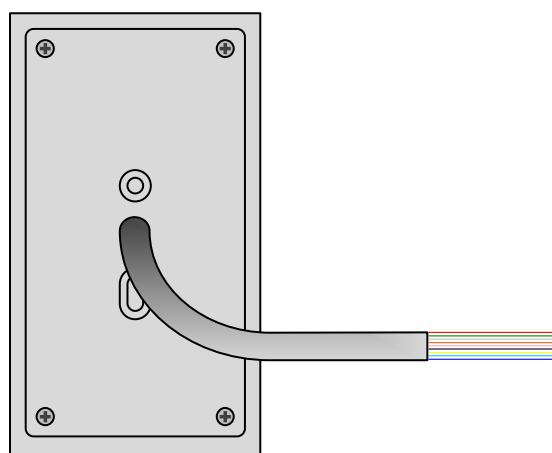
Wire Color	Function
Red	DC 7.5 ~ 12 V
Black	GND
Yellow	Beeper
Orange	Green LED
Light Red	Red LED
Green	Wiegand Data 0
White	Wiegand Data 1
Blue	RS-485 +
Light Blue	RS-485 -



**Rear View**

### GV-R1352

Wire Color	Function
Red	DC 7.5 ~ 12V
Black	GND
Yellow	Beeper
Orange	Green LED
Light Red	Red LED
Green	Wiegand Data 0
White	Wiegand Data 1
Blue	RS-485 +
Light Blue	RS-485 -
Gray	N/A
Purple	N/A
Brown	N/A



**Rear View**

## 1.2 Keypad (GV-RK1352 Only)

When accessing an entry using GV-RK1352, you can enter the door's PIN code on the keypad or present the card and then enter the card's PIN code on the keypad to be granted access. The access mode is defined on GV-ASManager.

1. **0~9 Number Keys:** Press the number keys to enter the PIN code.
2. **# Key:** Press the # key to confirm the PIN code.
3. **\* Key:** Press the \* key to cancel the PIN code.

## 1.3 LED Indicator and Beeper

In standby mode, the LED is blue. When a card is read, the LED flashes green and the beeper beeps once.

The reader comes with external control wires for Green LED, Red LED and Beeper. You can connect these control wires to a GV-AS Controller to change the default settings of the LED and Beeper. For details on how to configure the settings, refer to *5. Changing the Settings of Beeper and LED* later in this installation guide.

**Note:** You can only connect the LED and beeper wires to GV-AS210 / 2110 / 400 / 410 / 4110 / 810 / 8110.

## 2. Connecting the Reader to GV-AS Controller

You can connect the readers to GV-AS Controllers through Wiegand or RS-485 interface. Note that the connection between the reader and GV-AS Controller varies with different controller models. To see how many readers can be connected to a GV-AS Controller, refer to *The Number of Readers Supported by GV-AS Controllers* table at the end of this installation guide.

**Note:** GV-RK1352 / R1352 is compatible with GV-AS100 / 1010 / 110 / 120 / 210 / 2110 / 400 / 410 / 4110 / 810 / 8110. However, to enable the **keypad** function, you can only connect GV-RK1352 to the controllers through the following interfaces.

- GV-AS100 / 110 / 120: through Wiegand interface
- GV-AS1010: through RS-485 interface
- GV-AS210 / 2110 / 400 / 410 / 4110 / 810 / 8110: through Wiegand or RS-485 interface

### 2.1 Connecting through Wiegand Interface

The following diagrams use **GV-RK1352** and **GV-AS810 Controller** as an example. Up to eight readers can be connected to GV-AS810 Controller through the controller's Wiegand interface.

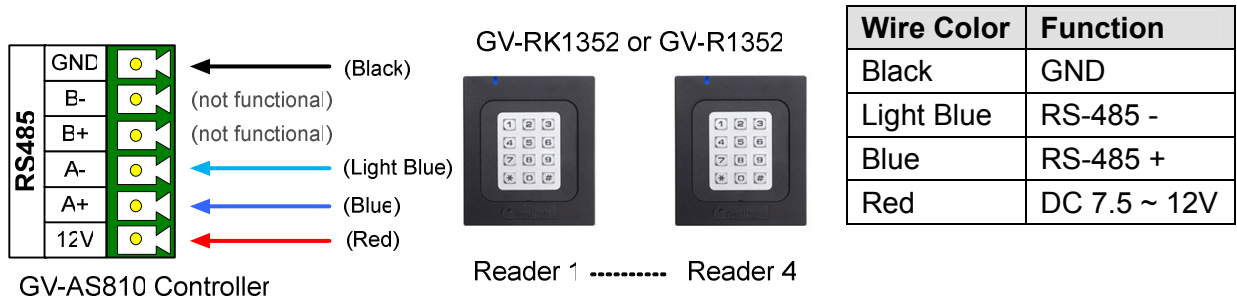


**Note:** Connection through Wiegand interface is not supported for GV-AS1010.

## 2.2 Connecting through RS-485 Interface

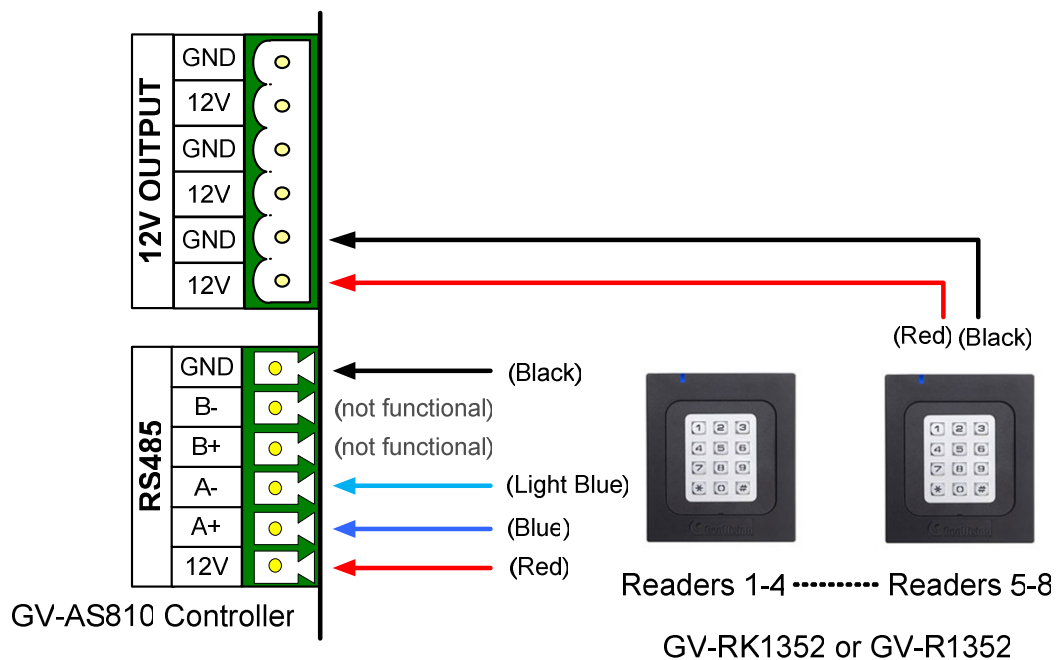
The following diagrams use **GV-RK1352** and **GV-AS810 Controller** as an example. Up to eight readers can be connected together to the RS-485 interface on GV-AS810 Controller.

- Connecting four or less readers to GV-AS810 Controller:



- Connecting five or more readers to GV-AS810 Controller:

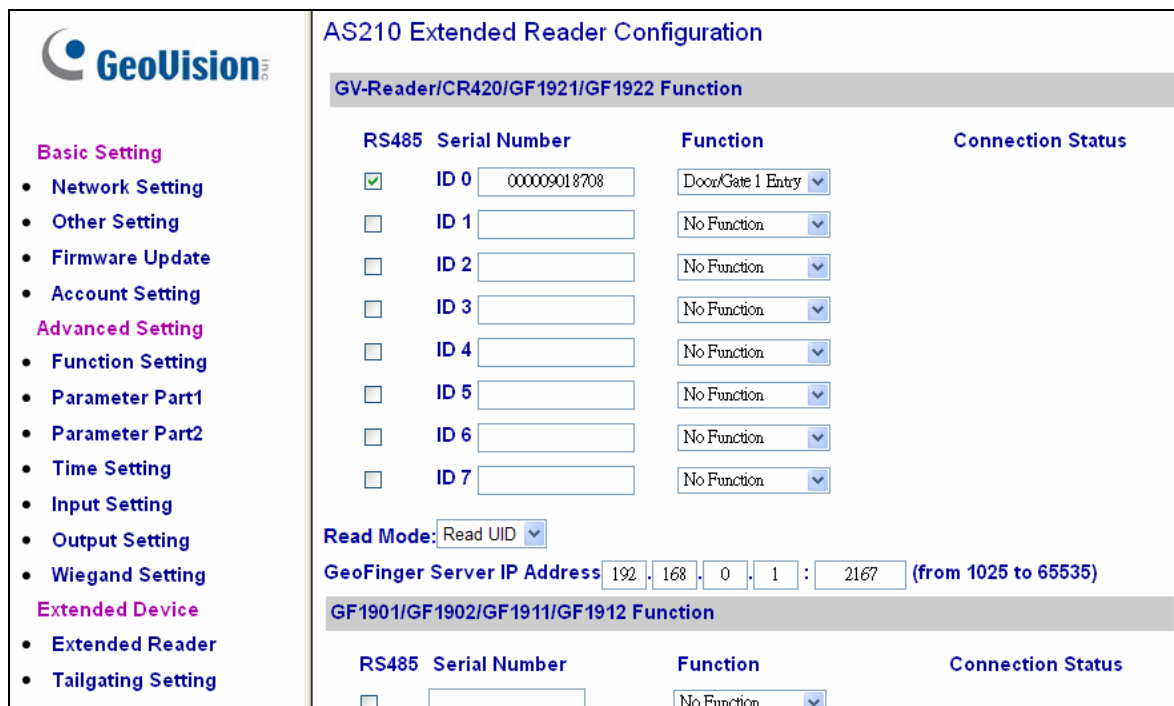
For readers five to eight, connect the RS-485 cable to the RS-485 interface on GV-AS810 Controller and then connect the 12V power output and GND of the reader to a 12V DC power output on the controller.



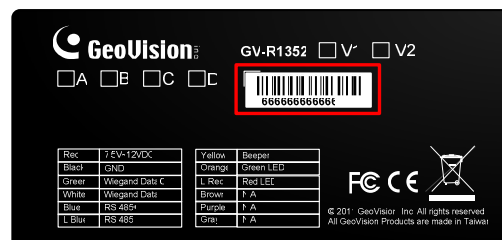
## 2.2.1 Defining Readers on GV-AS Controller Web Interface

Since multiple readers can connect to GV-AS Controller using one RS-485 interface, you need to specify which door each reader controls. This section explains how to define readers on the Web interface of GV-AS Controller. On the Web interface, you can also set the reader to read the GID or UID on GV-AS ID Cards / Key Fobs. Note that the Web interface of different GV-AS Controller models varies.

1. On the controller's Web interface, click **Extended Reader**. This dialog box appears.



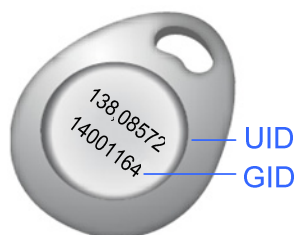
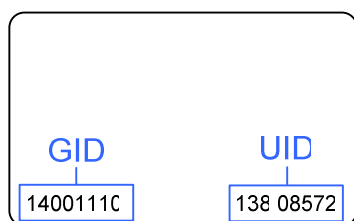
2. In the GV-Reader/CR420/GF1921/GF1922 section, select the **RS485** checkbox in front of the ID number and type the **Serial Number** on the rear panel of the reader. The ID number will be assigned to the reader.



3. Select a door/gate for the reader from the **Function** drop-down list.

- Next to **Read Mode**, select **Read UID** or **Read GID** to set the connected readers to read UID (unique identifier) or GID (GeoVision ID) on GV-AS ID Cards / Key Fobs.

If you select **Read GID**, make sure there are two numbers on your GV-AS ID Cards / Key Fobs as shown below. If there is only one number on your GV-AS ID Cards / Key Fobs, GID is not supported and you must select Unique Identification (UID).



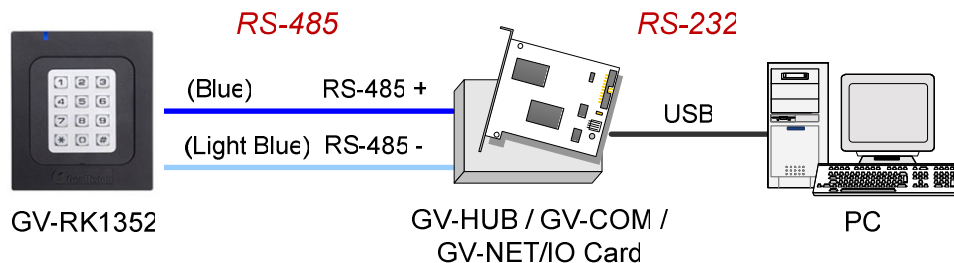
- Click **Submit**.

**Note:**

- When you click **Submit** on the Extended Reader page of a GV-AS1010 / 210 / 2110 / 410 / 4110 / 810 / 8110, all readers connected through RS-485 interface will reboot.
- GID ID format is only supported in GV-RK1352 / GV-R1352 V1.2 or later.

### 3. Installing the GV-R/RK/DFR Config AP

The GV-R/RK/DFR Config AP allows you to set the reader's beeper / LED, ID number, master / slave status, and whether it reads UID or GID. When using the Config AP, the reader needs to be connected to a PC through GV-COM, GV-Hub or GV-NET/IO Card V3.1.




You can install the Config AP from the Software DVD or GeoVision Website. To use a GV-COM, GV-Hub or GV-NET/IO Card V3.1, you also need to install GeoVision USB Device Driver.

#### Installing from Software CD

1. Insert the software CD and the Install Program window will pop up automatically.
2. Select **Install GeoVision USB Device Driver**.
3. In the GeoVision USB Driver Installer window that appears, select **Install**.
4. Go back to the Install Program window, and select **Run GV-Reader Config Utility**.

#### Downloading from GeoVision Website

1. Go to the Software Download and Upgrading page of GeoVision Website:  
[http://www.geovision.com.tw/english/5\\_8\\_AS.asp](http://www.geovision.com.tw/english/5_8_AS.asp)
2. Find the Supplemental Utilities section under the Access Control tab, and click the **Download** icon  of **GV-RK1352 & GV-R1352 & GV-DFR1352 Config Utility**.

<b>GV-Remote E-Map</b> Allows you to activate and view E-Maps remotely.
<b>GV-RK1352 &amp; GV-R1352 &amp; GV-DFR1352 Config Utility</b> Defines the ID numbers of the multiple readers connected.
<b>GV-RK1352 &amp; GV-R1352 &amp; GV-DFR1352 Firmware Upgrade Utility</b> Upgrades the firmware of GV-RK1352 & GV-R1352 & GV-DFR1352.

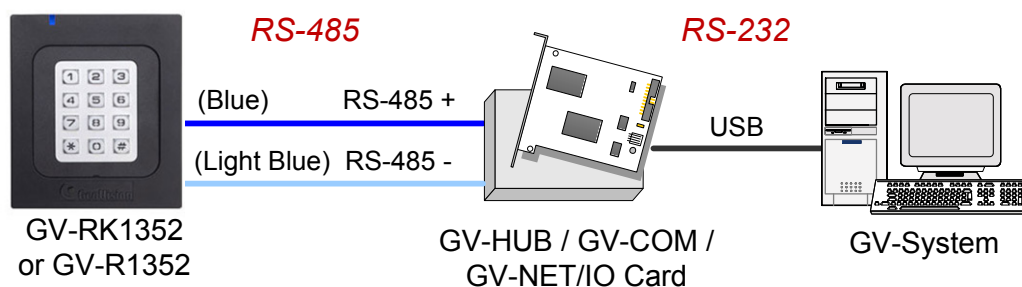
3. Under the Driver section, click the **Download** icon  of **GV-USB Device Driver**.



## 4. Overlaying Card Numbers on GV-System Live

### View

You can overlay card numbers recognized at the reader onto a camera channel on GV-System. To overlay card numbers on GV-System channel, the reader needs to be connected to a GV-System through GV-COM, GV-Hub or GV-NET/IO Card V3.1.

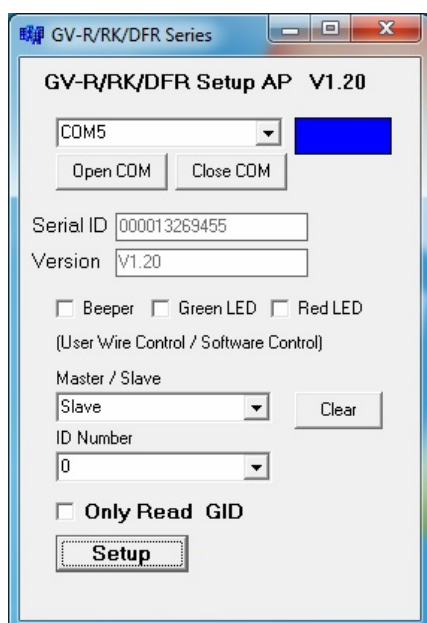


**Note:** GV-RK1352 / GV-R1352 is not compatible with GV-NET Card and GV-NET/IO Card of versions earlier than V3.

### 4.1 Defining the ID Number and Setting the Reader to Slave

After the reader is connected to the computer of the GV-System, use the **GV-R/RK/DFR Config AP** to define the ID number of the reader and set the reader to Slave.

1. Run **GV-R/RK/DFR Config AP**. Refer to 3. *Installing the GV-R/RK/DFR Config AP* above for how to install.

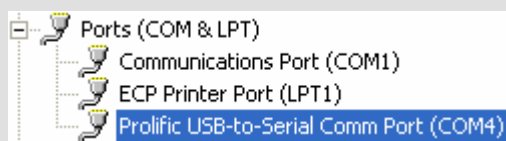


2. Select the COM port that is connected to the reader and click **Open COM**. The serial number and firmware version of the reader will be automatically detected. The red square next to the COM port box should change to blue to indicate the COM port is correct.
3. Under **Master / Slave**, set the reader to **Slave**.
4. Select an **ID number** for the reader. The ID number ranges from 0 to 7.
5. Click **Setup**. The settings are sent to the reader.

If you want to connect multiple readers to the GV-System, you need to set up a unique ID number for each reader. For this you need to connect each reader to the computer one reader at a time, and follow the instructions above to set up an ID number.

**Note:**

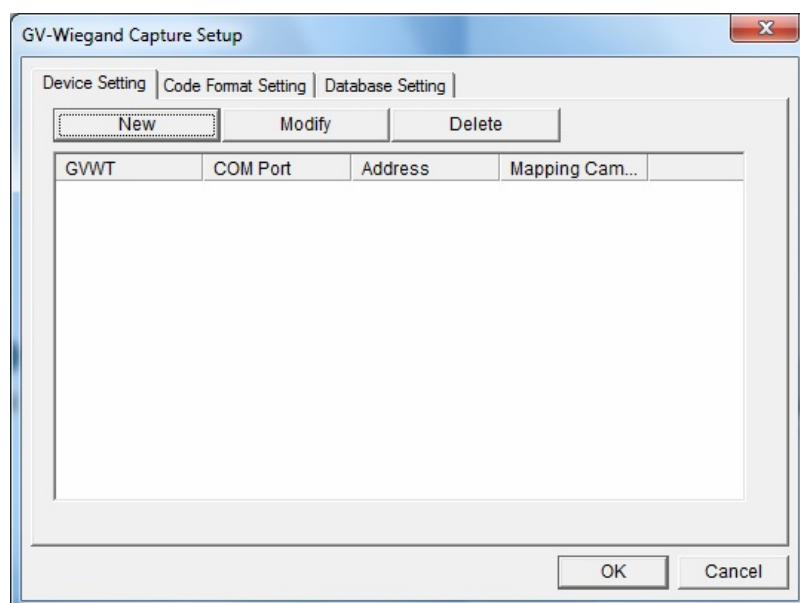
1. If the COM port is incorrect, an “**Error opening serial port**” message will appear. To verify the COM port that is connected to the reader, go to Windows Device Manager. In the Ports (COM & LPT) field, you should see the entry for **Prolific USB-to-Serial Comm Port** and the COM number currently in use.



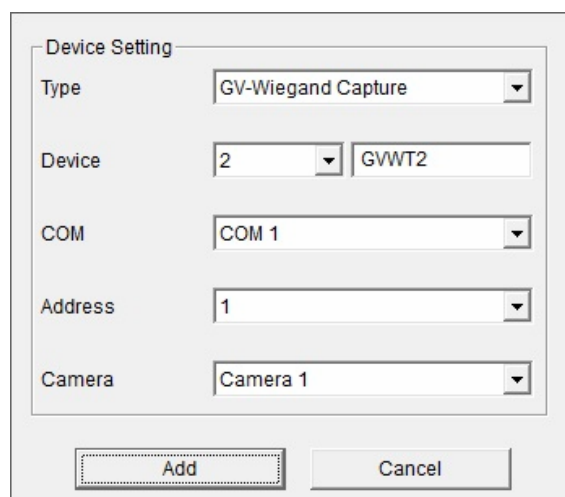
2. If you are using an older version of the Config AP, you will have to manually type the serial number of the reader. The serial number is on the rear panel of the reader.

## 4.2 Adding the Reader to GV-System

1. In GV-System, click the **Configure** button, select **Accessories**, and select **GV Wiegand Capture Device Setting**. This dialog box appears.



2. Click the **New** button. This dialog box appears.



- **Type:** Select GV-Wiegand Capture.
  - **Device:** Type a number and name to help you identify the reader.
  - **COM:** Select the COM port connected to the reader.
  - **Address:** Select the ID of the connected reader you set in GV-R/RK/DFR Config AP.
  - **Camera:** Assign the reader to a channel to overlay card numbers on the live view.
3. Click the **Add** button.

## 5. Changing the Default Settings of Beeper and LED

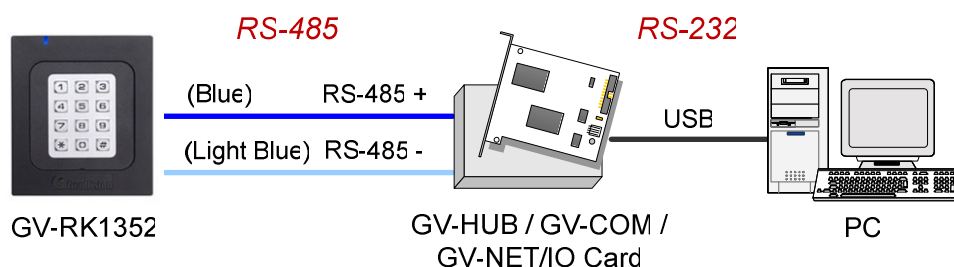
You can change the default settings of the LED and the beeper by enabling a GV-AS210 / 2110 / 400 / 410 / 4110 / 810 / 8110 to externally control the LED and Beeper. Through the Web interface, you can set the controller to trigger the red LED, green LED or beeper when the specified alarm events occur. For GV-AS400, built-in LED and beeper settings are available on the Web interface for outputs 9 ~ 16.

The GV-AS Controller and the reader need to be connected through Wiegand interface. You will have to:

1. Enable external control of the reader's Beeper and LED by using the **GV-R/RK/DFR Config AP**.
2. Wire the Beeper, Red LED and Green LED from the reader to the GV-AS Controller.
3. Specify the Beeper and LED settings for each door through the Web interface of GV-AS Controller.

### 5.1 Setting up Beeper and LED on GV-R/RK/DFR Config AP

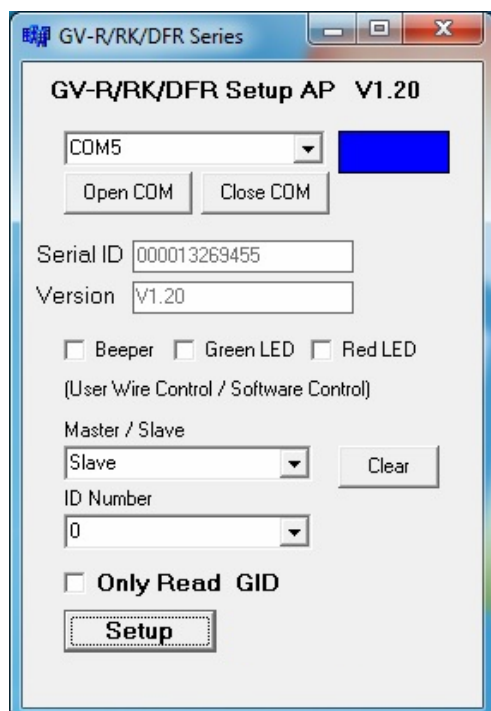
To enable the external controls of the Beeper and LED on GV-R/RK/DFR Config AP, the reader needs to be connected to a computer through GV-COM, GV-Hub or GV-NET/IO Card V3.1.



1. Start the **GV-R/RK/DFR Config AP** and select the COM port that is connected to the reader.

**Note:** To see how to install the Config AP and how to identify the COM port of the reader, refer to 3. *Installing GV-R/RK/DFR Config AP* and 4.1 *Defining the ID Number and Setting the Reader to Slave* earlier in this installation guide

2. Click **Open COM**. The serial number and the firmware version of the reader will be automatically detected.



3. To enable external control of Beeper or LED, select **Beeper**, **Green LED** or **Red LED**.
4. Select **Master** from the Master / Slave drop-down list.
5. Select an ID number for the reader. Make sure the ID number on the Config AP matches the ID number set on the Extended Reader page of the GV-AS Controller Web interface.
6. Click **Setup**. The settings are sent to the reader.

If you want to set up multiple readers to be controlled by the controller, you need to connect each reader to the computer one reader at a time, and follow the above instructions to enable external control.

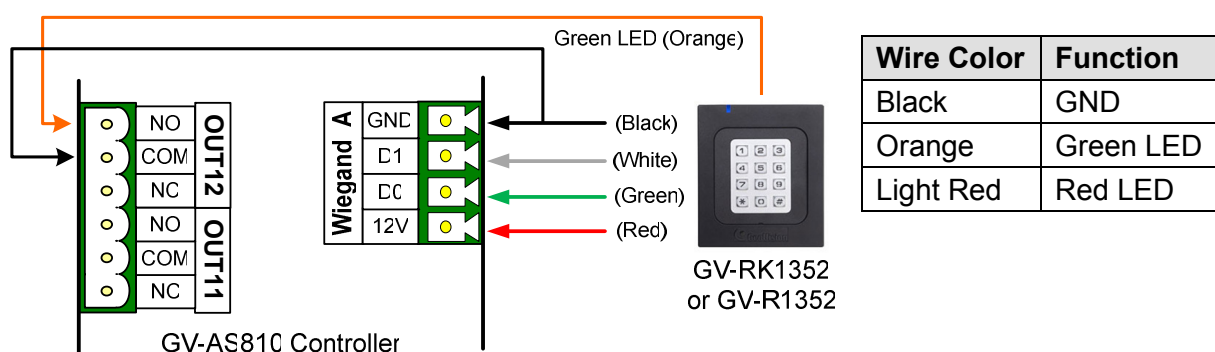
After the above settings, you need to connect the Beeper, Red LED and Green LED wires from the reader to the outputs of GV-AS Controller.

## 5.2 Wiring the Beeper and LED to the GV-AS Controller

To wire the beeper and LED to GV-AS210 / 2110 / 400 / 410 / 4110 / 810 / 8110, connect the control wires of the reader's Beeper, Red LED or Green LED to any of the outputs on GV-AS Controller. Note that outputs 9 ~ 16 on GV-AS400 are used for the built-in LED and beeper settings.

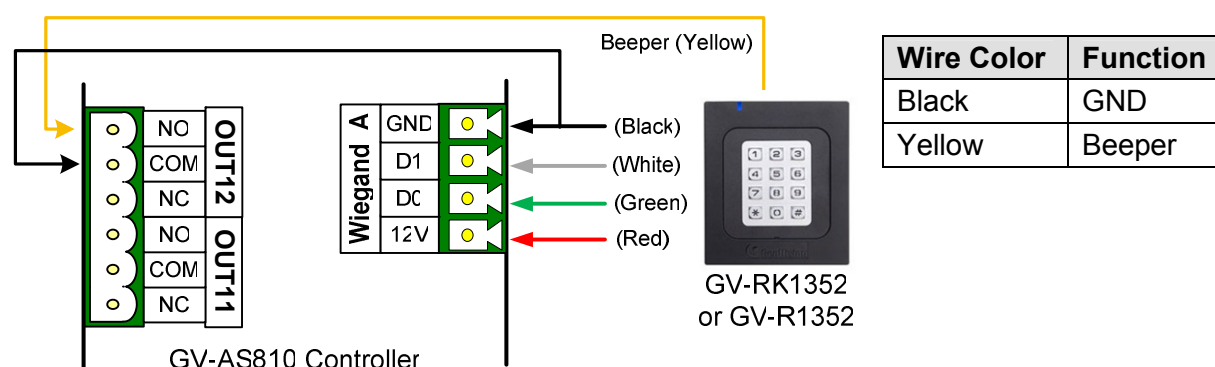
### Wiring LED to GV-AS Controller

The diagram below shows the connection for wiring Green LED using GV-RK1352 and GV-AS810 as an example. For Red LED, use the light red wire instead.

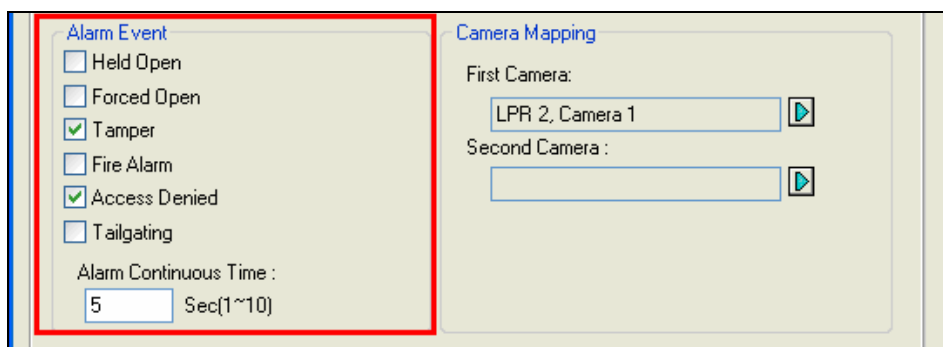


### Wiring Beeper to GV-AS Controller

The diagram below shows the connection for wiring the beeper using GV-RK1352 and GV-AS810 as an example.



After wiring, you also need to go to GV-ASManager to select the alarm conditions that will set off the reader's beeper. In GV-ASManager, right-click the GV-AS Controller in the device list, click **Settings**, and click the **Door / Gate** tab to select the alarm conditions.

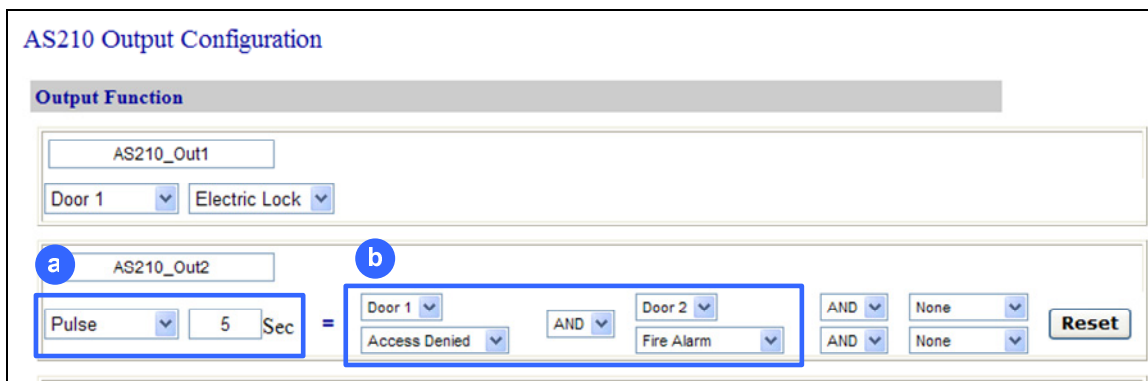


Alarm Event	Camera Mapping
<input type="checkbox"/> Held Open	First Camera: LPR 2, Camera 1
<input type="checkbox"/> Forced Open	Second Camera:
<input checked="" type="checkbox"/> Tamper	
<input type="checkbox"/> Fire Alarm	
<input checked="" type="checkbox"/> Access Denied	
<input type="checkbox"/> Tailgating	
Alarm Continuous Time : 5 Sec(1~10)	


### 5.3 Configuring the Beeper and LED Settings for Each Door/Gate

After connecting the wires for beeper or LED, specify the conditions to trigger the beeper and LED on the GV-AS210 / 2110 / 400 / 410 / 4110 / 810 / 8110 Web interface.

1. On the controller Web interface, click **Output Setting**. The page below appears.



2. Find the output wired to the beeper or LED and specify up to 2 alarm conditions to set off the beeper or LED.
  - a. **Output Type:** Select **Normal**, **Toggle** or **Pulse**. If you select Pulse, you can specify the number of seconds to trigger the beeper or LED.
  - b. **Output Conditions:** Select the door and the alarm conditions to trigger the beeper or LED. Up to 2 sets of output conditions can be set.
3. If you have wired the beeper or LED to outputs 9 ~ 16 on GV-AS400, select a door and select **Beeper**, **Green LED**, **Red LED** or **Invert Red LED**.



- **Beeper:** Enables the external control of Beeper.
  - **Green LED:** Changes the standby color to blue. When a card is read, the LED flashes green.
  - **RED LED:** Changes the standby color to red. When a card is read, the LED flashes blue.
  - **Invert Red LED:** Changes the standby color to blue. When a card is granted access, the LED flashes red.
4. Click **Submit**.



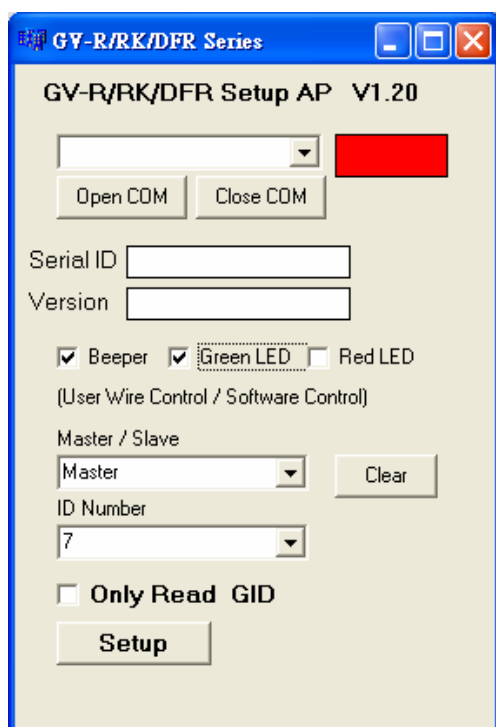
## 6. Setting UID or GID on GV-R/RK/DFR Config AP

By default, the readers read the UID (unique identifier) on ID cards or key fobs. Using GV-R/RK/DFR Config AP, you can set the GV-RK1352 / GV-R1352 to read GID (GeoVision ID) on GV-AS ID Cards / Key Fobs instead.

### Note:

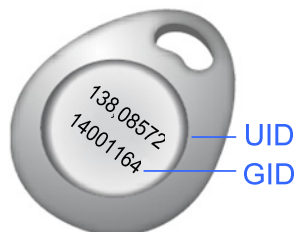
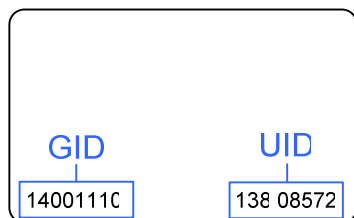
1. To see how to install the Config AP and how to identify the COM port of the reader, refer to 3. *Installing GV-R/RK/DFR Config AP* and 4.1 *Defining the ID Number and Setting the Reader to Slave* earlier in this installation guide
2. GID ID format is only supported in GV-RK1352 / GV-R1352 V1.2 or later.

1. Run **GV-R/RK/DFR Config AP**.



2. Select the COM port that is connected to the reader and click **Open COM**. The serial number and firmware version of the reader will be automatically detected. The red square next to the COM port box should change to blue to indicate the COM port is correct.
3. To set the reader to read GID, select **Only Read GID**.
4. Click **Setup** to apply the setting.

To use GID, make sure there are two numbers on your GV-AS ID Cards / Key Fobs as shown below. If there is only one number on your GV-AS ID Cards / Key Fobs, GID is not supported and you must select Unique Identification (UID).



## 7. Firmware Upgrade

GeoVision will periodically release the updated firmware on the website. The new firmware can be simply loaded into the reader by using **Update Utility** included in the Software CD.

### Important Notes before You Start

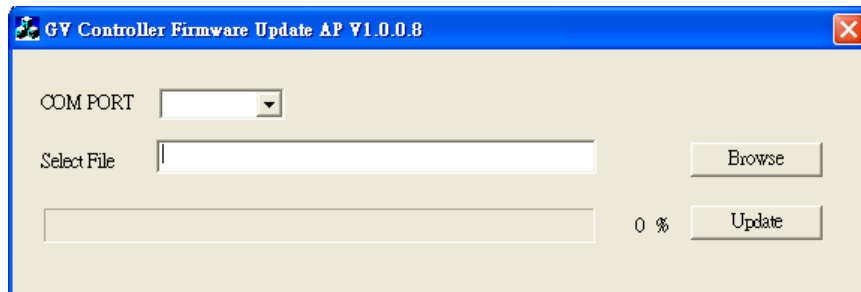
Before you start updating the firmware, please read these important notes:

1. While the firmware is being updated, the power supply must not be interrupted.
2. Do not turn the power off within 10 minutes after the firmware is updated.


**WARNING:** The interruption of power supply during updating causes not only update failures but also damages to the device. In this case, please contact your sales representative and send your device back to GeoVision for repair.

To upgrade firmware:

1. Insert the Software CD and select **Run Firmware Update Utility**. This dialog box appears.



2. Select the COM port of the reader.
3. Click the **Browse** button to locate the firmware file (.bin) saved at your local computer.
4. Click **Update**.
5. The LED indicator should flash purple during the process of firmware upgrading. When the process is complete, the reader will be sounded twice and the LED indicator will change to green.

**Note:** You can also download the firmware upgrade utility from the GeoVision website: [http://www.geovision.com.tw/english/5\\_8\\_AS.asp](http://www.geovision.com.tw/english/5_8_AS.asp). Under the Access Control tab, click the **Download** icon  of **GV-RK1352 & GV-R1352 & GV-DFR1352 Firmware Upgrade Utility**.

## 8. Specifications

	GV-RK1352	GV-R1352
<b>CPU</b>	8-bit microprocessor	
<b>Frequency</b>	13.56 MHz for ISO14443A (Mifare DESFire, Mifare Plus and Mifare Class)	
<b>Wiegand Interface</b>	Wiegand 26 / 34 bits, distance 30 m / 98.43 ft	
<b>RS-485</b>	9,600 bps, connect up to 8 GV-RK1352 / R1352 units	
<b>Power</b>	DC 7.5 ~ 12V	
<b>LED</b>	Red, Green and Blue LED	
<b>Beeper</b>	Buzzer	
<b>Reader Color</b>	Black	
<b>Supported ID Formats</b>	Reads GID and UID	
<b>Operating Temperature</b>	-35 °C ~ 65 °C / -31 °F ~ 149 °F	-30 °C ~ 65 °C / -22 °F ~ 149 °F
<b>Operating Humidity</b>	10% ~ 90% (no condensation)	
<b>Dimensions (W x H x D)</b>	95 x 108 x 23 mm / 3.74 x 4.25 x 0.91 in	65.80 x 115.6 x 20.5 mm / 4.6 x 2.6 x 0.8 in
<b>Weight</b>	260 g / 0.57 lb	120 g / 0.26 lb
<b>Ingress Protection</b>	IP66	
<b>Certification</b>	CE, FCC, RoHS	

### 8.1 The Number of Readers Supported by GV-AS Controllers

GV-AS Controller Model	Number of GV-RK1352 / R1352 Supported	
	Wiegand	RS-485
GV-AS100	1	1
GV-AS1010	Not supported	2
GV-AS110 / 120	1	Not supported
GV-AS100 / 110 / 120 with GV-ASBox	2	4
GV-AS100 / 110 / 120 with GV-ASNet	Not supported	2
GV-AS210 / 2110	4	8
GV-AS400	8	8
GV-AS410 / 4110 / 810 / 8110	8	8

## 9. Accessory (GV-RK1352 Only)

Optional accessories can expand the capabilities and versatilities of your GV-RK1352 Card Reader. Consult your sales representative for more information.

<b>GV-MountA900</b>	<p>GV-MountA900 is a mounting plate that allows you to attach GV-RK1352 to a US single gang power box.</p> <ul style="list-style-type: none"> <li>• Dimensions: 100 x 68 mm / 3.9 x 2.7 in</li> <li>• Weight: 55 g / 0.12 lb</li> </ul>
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### Connecting GV-MountA900

Screw GV-MountA900 to the US single gang power box through the hole C and to GV-RK1352 through the hole B as shown below.

